Daily Diary Report by Bid Item

Contract No.: 04-0120F4
Diary #: 980 **Const Calendar Day:** 553 **Date:** 09-Dec-2013 **Monday**
Inspector Name: Brignano, Bob **Title:** Transportation Engineer
Inspection Type:
Shift Hours: **Break:** **Over Time:**
Federal ID:
Location:
Reviewer: Schmitt, Alex **Approved Date:** **Status:** Submit

04-0120F4
04-SF-80-13.2/13.9
Self-Anchored
Suspension Bridge

Weather

Temperature **7 AM** **12 PM** **4PM**
Precipitation **Condition** clear

Working Day ☑ If no, explain:

Diary: Dispute ☐

General Comments

CCO 314, SAMPLING AND TESTING A354 GRADE BD MATERIAL:

VGO starts work on site at 0800 with Dave Van Dyke. Then, mid-morning, Dave picks up Nick Buck from the airport who flies in from Oregon this morning. Lunch is 1200 to 1230. During the day, VGO works with ABF during the installation of the jacking rods at Test Rigs #11, #10, #9, and #8 to ensure that the strain gauges and wiring are not damaged. Then there is a meeting with ABF, the DJV, and VGO from 1600 to 1800 to discuss the DJV's requirements for VGO's final report for the data from Test Rigs #1 through #4, with both Dave and Nick in attendance. They leave the site after 1800.

ABF Engineer Kelvin Chen spends part of today working in the office and field on CCO 314 issues. ABF Engineer Kelvin Chen and Manager Kevin Smith are in the 1600 to 1800 meeting to discuss the DJV's requirements for VGO's final report for the data from Test Rigs #1 through #4.

Ironworker Barry Rothman is working an 8-hour shift (0700 to 1530) today on CCO 314. Ironworker general foreman James (Fish) Sturgeon is working a 12-hour shift today, but only the regular time part of the day is spent on CCO 314 with the overtime portion of the day on non-CCO 314 preparations for the Left Coast Lifter (Shear Leg Crane) removal from the jobsite not inspected by me. Ironworker Sturgeon spends parts of the day called out to elsewhere at Pier 7 for non-CCO 314 operations for short time periods that add up to a couple of hours. Operator Ryan Oku works at various times at the CCO 314 test rig location, adding up to a few hours. Ironworker Rob Martell is not working on CCO 314 today after a foot/ankle injury Friday 12/6/2013. Laborer Carlos (Pedro) Garcia is working a 12-hour shift today, but only the regular time part of the day and a little time into the overtime portion of the day is spent on CCO 314, with most of the overtime portion of the day on non-CCO 314 preparations for the Left Coast Lifter (Shear Leg Crane) removal from the jobsite not inspected by me.

Over the weekend, the TR 5 jacks were set and adjusted. Today I examine the jacks and determine that the jacks need to be flipped around. The large jack base/housing of each jack is against the small jacking beam and does not have full bearing. If the jacks are flipped, the large jack base/housing will be against the test rig end plate with full bearing and the smaller jack piston will be against the smaller jacking beam also with full bearing. Also, the timber supports below the jacks need to be adjusted to provide more room for VGO's displacement transducers – need clear area in between the jacks so that there is room either side of the jacking rod for the frame that holds the VGO displacement transducers as far away as possible so that rotation in addition to displacement can be monitored. Note that VGO is test fitting different frames for the displacement transducers – the originally planned displacement transducers planned for use with 150-ton jacks will not fit with the larger diameter 300-ton jacks that are now being used instead. The ironworkers and laborers spend the first part of the morning working on the jacks and jack supports at TR 5

to make the necessary corrections.

After the morning break, ABF begins work on installing the jacking rods for TR's #11, #10, #9, and #8. These couplers have all been successfully trial fit at Dyson and the rods and couplers marked to indicate which pair were test fit together. Note that the trial fit at Dyson was with anti-seize (Never-Seez) on the threads, but the required thread sealant in the field will be Rector Seal No. 5 per the plans. Note that all 4 jacking rods had strain gauges previously installed, with VGO finishing that operation on Saturday 12/7/2013. With the strain gauges installed, the rods will be installed from the north end of the test rigs where the end plate is not currently in place, providing clearance to install the rods without impacting the strain gauges. The strain gauges are located sufficiently far back on the jacking rod such that they will not reach the diaphragm between the wet chamber and the dry chamber with the grommet because it is a tight hole that would damage the strain gauges. The rods will pushed well beyond the final per plan location intentionally, so that after the coupler is installed on the wet chamber side of the diaphragm, the backside of the coupler and the portion of the rod that will need to be painted are located outside of the wet chamber for proper access for application of the paint.

The jacking rod at TR #11 is installed starting at ~1030. The drip ring is added to the rod mid-way through the installation and then is pushed down the rod in increments as the rod is installed, using the test rig handholes for access. The rod is greased (using one of two approved grease products - Thomas Lubriseal Stopcock Grease or Dow Corning High-Vacuum Grease) for where it needs to slide through the grommet so it does not catch on the grommet during the installation process. After the rod is in the proper location for the future paint application, all portions of the rod that went through the grommet are cleaned to remove the grease. Then the per plan thread sealant (RectorSeal No. 5) is applied to the threaded end of the jacking rod, with excess used so that it will be pushed out when installing the coupler to ensure that the void space in the thread interface is fully filled/sealed. Then the coupler is installed. About half way during the installation, the threading of the coupler becomes more difficult. After the early stage of turning the coupler by hand, a strap wrench is needed to turn the coupler while either a strap wrench or a chain wrench (try multiple tools) is used to hold the jacking rod. After the coupler is installed ~185mm ~7-1/4" onto the jacking rod (3/4" short of the required engagement of 8" -> ~90% of the required engagement length), the coupler will not thread any more. Rather than remove the coupler, clean threads, look for problems, and attempt installation again, I tell ABF to move to the next location and I check with the DJV to see if this is acceptable. Based on thread engagements being slightly less than the per plan requirement at some locations at TR's 1-4 with approval from the DJV, I anticipate that this slightly less than plan thread engagement will be acceptable. Later in the day, the DJV (Carol Choi) confirms that the thread engagement is acceptable.

The jacking rod at TR #10 is installed starting at ~1130. The steps and operations for this jacking rod and coupler are similar to those for the previously installed jacking rod at TR #11. The coupler thread engagement on the rod is 210mm per plan – fully engaged threads.

After the lunch break, the jacking rod at TR #9 is installed starting at ~1245. The steps and operations for this jacking rod and coupler are similar to those for the previously installed jacking rods at TR's #11 and #10. The coupler thread engagement on the rod is 210mm per plan – fully engaged threads.

The jacking rod at TR #8 is installed starting at ~1340. The steps and operations for this jacking rod and coupler are similar to those for the previously installed jacking rods at TR's #11, #10, and #9. However, after installing the coupler about half way, it will not go any more. The coupler is unthreaded from the jacking rod, and all the thread sealant in the coupler and on the rod is removed so that the threads can be cleaned. It is then noticed that there are some damaged threads in the coupler. Some of the damaged threads are in the back half of the coupler that the jacking rod didn't even reach during today's installation attempt – it appears that the threads were damaged during the previous trial fit at Dyson. The damage consists of a few missing threads in the coupler – we could still attempt an installation with the rod threads turning past the missing coupler threads, but it would be a lack of thread engagement and there is the risk that the rod threads could bind on the rough surfaces on the coupler threads, resulting in stripped threads. Work is stopped at TR 8 about 1450, and work is now pending arrival of the spare coupler from Dyson, which was ordered but not with the previous shipment and will arrive with the next shipment.

After the ironworkers leave the CCO 314 test rig site ~1515, the laborer Carlos (Pedro) Garcia stays later to remove excess thread sealant (RectorSeal No. 5) from the rod at TR's #11, #10, and #9. This is the excess thread sealant material that was used to ensure that the void space in the thread interface is fully filled/sealed with the excess thread sealant material pushed out. All the excess thread sealant material not in the thread engagement (at the end of the coupler and on the rod) is removed so that this will not affect the application of the paint to the coupler and rod in the next step at these TR's.

There is a hydraulic pump (Powerteam) on idle/standby at the work area. A generator – Whisperwatt 7000 – ABF ID 002343 is on idle/standby for part of the day and in use for part of the day. A compressor – IR P185R – ABF ID 002075 is on idle/standby at the work area. An extendable forklift is used today. A Kubota cart is used today.

Note that there is k-rail at this work area. Some of the k-rail is rented and addressed by the rental agreement. Some of the k-rail is ABF's k-rail (27 pcs @20' and 8 pcs @10') used on site and paid as rented from ABF on a daily basis. However, one of the purchased 10' k-rail and one of the rented 20' k-rail have been removed at some point by ABF's ironworkers. To compensate, the ABF k-rail quantities will be reduced by one for each length. To elevate the k-rail, crane mats and timber blocking (12x12's) are in use. The k-rail quantities are as follows:
10' bought k-rail = 20 pieces (minus 1 missing)
10' ABF k-rail = 8 pieces
20' rented k-rail = 22 pieces (minus 1 missing)
20' ABF k-rail = 27

The agreed extra work with ABF is as follows:
Engineer Kelvin Chen - 5 hrs
Ironworker General Foreman James (Fish) Sturgeon - 8 hrs
Ironworker Barry Rothman - 8 hrs
Laborer Carlos (Pedro) Garcia - 8 hrs Reg, 1 hr OT
Kubota Cart - 8 hrs
Extendable Forklift - 8 hrs
Radios (3 radios) - 25 hrs
k-rail: 26 pcs @20' and 7 pcs @10'
Crane Mats (12x12 - 5'x16') - 10 pcs
Crane Mats (12x12 - 5'x7') - 4 pcs
See the attached Extra Work Order - Signed with ABF for CCO 314 work

Included in the shipment from Dyson that arrived last week were spherical washers for TR's #6 and #8-11 as well as the cylindrical sleeve for TR #7 that need to painted. CCC blasts the washers and applies the zinc primer (Interzinc 22 HS) on the spherical washers today and the first of two coats of the epoxy paint (Carboguard 890) on the cylindrical sleeve today. The second coat of the epoxy paint on the cylindrical sleeve will be tomorrow.

The agreed extra work with CCC is as follows:
Painter Rafael Serrano - 4 hours
Interzinc 22 HS - 1 gallon
600# blast pot - 2 hours
825 CFM Compressor - 2 hours
Abrasive - 6 sacks
See the attached Extra Work Order - Signed with CCC for CCO 314 work
Note that the material covers more than today's work, with previous and future extra work agreements from CCC not including the materials.

About 1300, CT-METS arrives at the test rigs to perform hardness testing on the test rods, using field hardness testing procedures. From CT-METS are Courtney Goldstein and James (Jamie) Doe. They check hardness at one end of the test rod at TR 5 that is already installed in the test rig. The other end is

in the coupler. Note that this is a retest with testing happening already on both ends on a previous date. They also check both ends of the test rod for TR 7, also as a retest. At the test rod for TR 7, additional grinding is needed at one end – remove dirty surface and smooth the surface. An ABF ironworker uses a disk grinder for this operation briefly to assist CT-METS. The hardness checks on these 2 rods are complete about 1500.

About 1345 to 1400, CT-METS epoxies an Acoustic Emissions sensor on the coupler at TR 5 for some trials. Present from CT-METS are Mike Malyy, Pari Aghili, and Elijah Turner. Then, they come back about 1500 after the epoxy has set for pencil lead breaks on this test rod to test the AE sensor. This is not the final installation of this sensor and is only a test of the plan for sensor installation on the coupler.

Also today, CT-METS personnel move all the cut tail ends (top stickout beyond shear bottom plate) of the 2008 rods previously removed from the field at E2. These pieces of the 2008 rods were cut to accommodate the shear key modifications on a different CCO. The pieces were stored by ABF in the warehouse at Pier 7 for turnover to CT. Because of limited space in the warehouse, to eliminate the possibility of this material accidentally being scrapped (ABF is clearing unnecessary items from the warehouse), to keep the material protected from the environment, and to keep the material in a secured location, these rod pieces are moved to the Conex at Pier 7 where other A354 Grade BD material is being stored. There are also some 3” diameter spherical nuts and washers moved to the Conex.

INSPECTOR OT REMARK:

Office 2 hours: I am in the office for CCO 314 issues. There is a meeting with ABF, the DJV, and VGO from 1600 to 1800 to discuss the DJV’s requirements for VGO’s final report for the data from Test Rigs #1 through #4. ABF’s shift is 0700 to 1530 on CCO work. My shift is 0700 to 1800 and my OT hours are 1600 to 1800.